



March 21, 2017

Mr. Richard Sumner  
Maricopa County Air Quality Department  
1001 N. Central  
Suite 125  
Phoenix, AZ 85004

Dear Mr. Sumner,

In response to your request for information of February 23, 2017, please consider the following:

**1. Through what mechanism(s) are emissions of regulated air pollutants discharged to atmosphere from the hen houses at the Tonopah Facility?**

Primarily, if not exclusively, through the east-facing open end of each hen house.

**2. Please describe the configuration and function of the fans at the Tonopah facility that were the subject of testimony?**

Each hen house includes two primary sections, the area that houses the hens and the area where manure is collected. The two sections are separated by an internal wall. This wall includes approximately 40-50 thermostatically controlled fans. The fans are internal to the building. The fans serve two functions — they induce air flow in the hen section for purposes of ventilating and cooling the hens and they aid in manure drying and pest management in the manure area.

**3. Are emissions from the hen houses at the Tonopah Facility discharged to the atmosphere through the fans?**

No. The fans are internal to the buildings; they do not discharge any emissions to the outdoor atmosphere. As noted above, nearly all emissions from the hen houses are discharged to the outdoor atmosphere through the east-facing open end of each hen house. Note: Particulate matter and gaseous substances are not air pollutants under 42 U.S.C. § 7602(g) until/unless they are discharged into “ambient air.” Similar language in MCAQD rule 100, Section 200.10 uses the term “outdoor atmosphere” in the definition of “air pollutant.” The terms “emission” and “emit” have meaning only in the context of air pollutants. The movement of dust and other air constituents within a building, whether mechanically induced or otherwise, is not regulated under the Clean Air Act or the MCAQD permitting rules.

Ms. Martin erroneously testified that there are non-fugitive emissions “coming out of the fans” (11/7/2016 Tr. 55:14-20) and “coming through the ventilation fans” (11/7/2016 Tr. 59:10-16). The materials passing through the fans are merely passing from one part of the building to

another; they are not air pollutants and are not being emitted. Both Ms. Martin (11/7/2016 Tr. 54:10-21) and Mr. Blackson (11/7/2016 Tr. 32:13-33:1) acknowledged in their testimony that the emissions from the hen houses are discharged to the outdoor atmosphere through the east-facing open end of each hen house.

**4. Is each east-facing open end of the buildings a “stack, chimney, vent, or other functionally equivalent opening”?**

No. These terms, as used in the air permitting rules, refer to chimneys or similar discharge points which are susceptible to application of air pollution control devices. The open end of the building is entirely incompatible with such application: The face velocity (a measure of the speed at which air flows through the doorway) is very low and is highly variable. Moreover, the open end serves an important function in allowing manure to be loaded into trucks using a wheel loader like the one shown in this picture:



An opening through which a wheel loader is routinely driven is not a chimney or a vent and is not functionally equivalent to those things.

In addition, the legal inquiry into the fugitive/non-fugitive emissions does not end with the determination of whether the emissions could or could not pass through a stack, chimney, vent, or other functionally equivalent opening. As stated by EPA, “we interpret the phrase ‘could not reasonably pass’ by determining whether such emissions can be **reasonably collected or captured** (e.g. enclosures or hoods). Under this interpretation, it is axiomatic that any emissions actually collected or captured by the source are non-fugitive emissions. The answer is less clear when the source is not currently collecting or capturing the emissions. In these circumstances, we make case-by-case determinations as to whether a source could reasonably collect or capture such emissions.” (72 Fed. Reg. 63258, Nov. 13, 2007; 73 Fed. Reg. 77891, Dec. 19, 2008). EPA utilizes the following 3-part analysis to determine whether emissions qualify as fugitive:

1. Determining which emissions could “reasonably pass” is a case-by-case decision based on whether or not the emissions can be reasonably collected or captured.
2. Because another similar facility collects, captures, or controls emissions does not mean that it is reasonable for others to do the same, but it is a factor in each consideration.

- (a) If a source already collects or captures and discharges the emissions through a stack, chimney, vent or other functionally equivalent opening, then such emissions are non-fugitive at that source.
- (b) If we establish a national emissions standard or regulation that requires some sources in the source category to collect or capture and control such emissions, then this weighs heavily towards a finding that the emissions are non-fugitive at other sources in this category; and
- (c) The more common collection or capture of such emissions is by other similar sources the more heavily this factor should weigh toward a finding that collection is reasonable.

3. The cost to collect or capture emissions is a factor when considering what is “reasonable.”

- (a) The combined costs to collect or capture and control emissions can be used as an alternative measure for the costs of emissions capture or collection alone in the case-by-case analysis;
- (b) The surrounding air quality (e.g., nonattainment areas) is a consideration when deciding if costs (collection, capture, control) are reasonable, and,
- (c) If it is not technically or economically feasible to control the emissions, then collection or capture of such emissions may not be reasonable.

According to EPA, “these guiding principles recognize that our existing guidance does not establish a non-rebuttable presumption, and does not attempt to establish a specific methodology states must use in conducting the case-by-case analysis. However, the expanded principles explain how states should weigh collection or capture of emissions by other similar sources in that analysis.” (72 Fed. Reg. 63259, Nov. 13, 2007; 73 Fed. Reg. 77891, Dec. 19, 2008).

**5. What would be required in order to capture and control a substantial portion of the particulate matter emissions from the hen houses at the Tonopah facility?**

It has not been determined whether such capture and control could be safely achieved. Assuming for the sake of argument that it is feasible, such a reconfiguration would be a massive and expensive undertaking even in just one hen house. At least in theory, an exhaust hood could be constructed above the conveyor system in the manure end of the building. The end of the building that is approximately 80 feet wide would have to be equipped with doors in order to allow for the hood to collect and capture a substantial fraction of the emissions. Because the doors would restrict air flow across the manure piles, additional fans would be required along the north and south walls in the manure section of the building in order to provide continuous flow of fresh air into the building and across the manure piles. A preliminary analysis of such a system shows the hood system would require exhaust fans sized for an air flow of more than 1.5 million cubic feet per minute; even without an air pollution control device, the fan would require an electric motor of approximately 1500 hp output. A fabric filter baghouse to control emissions of particulate matter, assuming a gas-to-cloth ratio of 9 ft/min, would increase the pressure drop to approximately 10 inches of water and would require an increase in the fan motor size to more than 3000 hp. The baghouse would contain approximately 13,000 fabric filter bags; total cloth area would be more than 170,000 square feet; and the baghouse structure would be

approximately 50 feet wide by 200 feet long and 25 feet high. The total capital cost of such a system, for each building, would be at least \$13 million. As stated by the EPA, “we believe that when the only reason to collect or capture such emissions would be to control the emissions, and there is no technical or economically feasible means to control the emissions, then collecting the emissions is nonsensical, and thus, may not be reasonable.” (72 Fed. Reg. 63259, Nov. 13, 2007; 73 Fed. Reg. 77892, Dec. 19, 2008). In this case, the collection of such emissions would not be economically feasible.

**6. Are emissions from hen houses at other facilities with a similar building configuration typically captured and controlled?**

No. We are not aware of any other layer operation at which the emissions are actually captured or controlled. It should be noted that many of those facilities include fans which are on the external walls of buildings, such that the materials passing through the fans are air pollutant emissions. Even in that configuration, however, the emissions passing through the fans are properly considered fugitive emissions. EPA policy provides that susceptibility to collection and control is an important consideration in determining whether emissions are fugitive or not. The capture and control of emissions from a hen house would require a massive and exorbitantly costly project, even for facilities of the older design where air pollutants are discharged to atmosphere through fans.

**7. What efforts has Hickman’s implemented to control environmental impacts at the Tonopah Facility?**

Hickman’s Family Farms has implemented extensive voluntary measures to control environmental impacts from its facilities, including the Tonopah facility. As further detailed below; these efforts include paving of access roads, control and movement of manure for quicker drying, pest/vector management, and use of proprietary feed mixtures.

**A. Paving of access roads and Day-to-Day Operations for Dust Control:**

Hickman’s Family Farms implements voluntary dust control measures at the Tonopah facility from each of the following categories:

- Category 1: Arenas, Corrals, & Pens (Housing);
- Category 2: Animal Waste and Feed Hauling and Transporting;
- Category 3: Unpaved Access Connections; and
- Category 4: Unpaved Roads and Feed Lanes.

Category 1:

- Fans, louvers, and soffit inlets are cleaned at Hickman’s Family Farms’ approximately once every 18 months;
- No bedding is used at Hickman’s Family Farms;
- Vegetation is controlled on building exteriors by the Hickman’s Family Farms’ Pest Control Division;
- Moisture is added through ventilation systems; and
- All animals are housed in fully enclosed ventilated buildings.

#### Category #2:

- Spilled feed is removed based upon Hickman's Family Farms' written policy;
- All feed is stored in enclosed structures;
- Hickman's Family Farms adds oil and/or moisture to the feed;
- Enclosed feed distribution systems are used;
- Drop distance is minimized;
- Transfer points are enclosed;
- Floors and walls are cleaned as needed by an assigned crew;
- Aisles between cage rows are cleaned on a daily basis by Hickman's Family Farms personnel;
- Manure solids are separated and stacked within the manure drying barns;
- Moisture is maintained in the manure solids; and
- A rotary dryer is utilized to dry the manure waste.

#### Category #3

- Speed control devices are installed;
- Traffic access is restricted;
- A track out control system is installed and maintained;
- Signage to limit vehicle speed to 15 mph is installed.

#### Category #4:

- Engine speed governors are installed on feed trucks limiting speed to 15 mph;
- Signage to limit vehicle speed to 15 mph is installed;
- Speed control devices are installed;
- Traffic access is restricted;
- Aggregate cover was applied and is maintained; and
- Water is applied and maintained as a dust control suppressant.

Per Hickman's Family Farms written procedures and policy, speed limits on all facilities and access roads are 10 MPH, to include paved roads. All dirt/aggregate roads are 10 MPH unless dust is being created, then lower speed to adjust for dust control. Speed limits in employee parking lots are 5 MPH, which includes a restriction of spinning tires. Failure to adhere to this policy and procedure may result in a verbal written warning, written reprimand, or termination.

A water truck operator is assigned to apply fresh well water to control emissions before, during, and after dust-generating operations 7 days a week. This includes all construction activities, paved and unpaved access roads, as well as any additional area of the facilities that have the potential to generate dust as a result of vehicular traffic.

Front gate guards are assigned to actively monitor trackout throughout the workday. Brooms are available in trucks and at the gates for easy access to attend to trackout. If necessary, the water truck operator can be utilized for water application.

All Hickman's Family Farms supervisors/managers are trained to understand the requirements of the dust control plan and relate that to the employees on their team. Training includes the procedure that if any visible dust that may cross property lines or if an activity may allow on-site

emissions to exceed 20% opacity, Hickman's compliance department personnel are notified to assist with an alternative solutions to allow operations to continue.

All Hickman's Family Farms supervisors/managers are trained to implement and enforce the "Dust Free Zone, Adjust Speed Accordingly, 10 MPH is our maximum speed" policy, pertaining to paved roads as well. The policy is strickly enforced and disciplinary will be issued to employees who violate any of the best management practices. The Hickman's Family Farms compliance department patrols the facilities to ensure complinace.

All locations have posted speed signs and fencing to allow only approved vehicle traffic and keep parking in controlled area, restricting access to inactive areas.

Track-out control systems are utilized throughout Hickman's Family Farms facilities. Track-out is immediately cleaned if it extends 25 feet or more (cumulative) in distance. A Track-out control system means a device to remove mud or soil from a vehicle before the vehicle enters a paved public road. Using a track-out control system helps remove mud and soil from the tires of farm equipment and vehicles before they enter a paved public road, where the mud or soil can be crushed into fine particles and easily suspended in the air by passing vehicles.

Pavement, asphalt, concrete, or similar materials are applied to at the intersections of a paved public roadway and all farm entrances.

#### **B. Control and movement of manure for quicker drying**

Hickman's Family Farms has implemented the following voluntary practices for manure waste management at the Tonopah facility:

Each barn at the Tonopah facility is equipped with a manure curtain that ensures emissions from the manure are reduced based upon increased drying rates as a result of installation. The manure shed screens also serve to reduce dander from escaping the drying shed while the manure belts are in operation.

Once the manure is deposited via conveyor from each lay house and into the manure drying barns into separated and stacked locations, the manure is removed from the Tonopah facility 5-6 days per week. Each house is completely emptied approximately every 14 days to ensure that there is not an accumulation for flies and pests to create a harborage.

#### **C. Pest/vector management**

Hickman's Family Farms has written an Integrated Pest Management (IPM) Plan to control pests and vectors at all facilities. Within the plan, pests and rodents to be control include:

- Cockroaches;
- Ants (other than carpenter ants);
- Winged termite swarmers emerging indoors;
- Incidental/occasional invaders including bees & wasps entering from the outdoors; and
- Flies and other arthropod pests;

- Norway rat;
- Roof rat;
- House mouse;
- Deer mouse; and
- White footed mouse

The Hickman's Family Farms Pest Control Department is supervised by a Certified License Applicator for the purpose of identifying any potential problem areas that may be contributing to pest and rodent infestation within the facility. Included with this responsivity is to make recommendations for corrective measures that should be implemented, and develop and implement a comprehensive IPM Plan.

The Hickman's Family Farms IPM plan utilizes methods of insect and rodent control which includes:

- Structural maintenance and sanitation;
- Monitoring for insect & rodent populations;
- Mechanical and biological control measures; and
- The use of insecticides and pesticides.

These methods help to eliminate food, moisture and harborage for pests and rodents, making their survival more difficult. Insecticides and pesticides are not applied on a routine basis; however, they are used as a tool to maintain pest populations at or below the acceptable level. The selection of insecticides and pesticides that are used will be determined and approved by the Hickman's Family Farms Pest Control Department Supervisor.

The proper implementation of this program reduces the volume, toxicity and frequency of insecticide and pesticide applications, therefore reducing the risk of potential exposure to building occupants who may be sensitive to their use.

The Hickman's Family Farms Pest Control Department has designated technicians that are responsible for the following pest control programs:

- Rodent Control & Preventions;
- Insect Control & Preventions;
- Weed Control & Preventions; and
- Bird Control & Preventions

All pest control technicians have been properly trained in the handling and disposal of insecticides and rodenticides by the Hickman's Family Farms Pest Control Department Supervisor.

The following outlines the locations, procedure, and frequency for pest control management at all Hickman's Family Farms facilities:

Location	Frequency	Procedure
Rodent Control & Preventions		
Interior Lay House Barns	Bi-Weekly	Monitor and service all interior mechanical

Location	Frequency	Procedure
		trapping mechanisms and bait stations with in the barn. If a rodent is discovered it is removed immediately; and a corrective action will be taken. All corrective actions are noted and logged.
Exterior Lay House Barn	Bi-Weekly	Monitor and service all exterior bait stations. All findings are noted and logged to monitor the rodent population & activity level. All spent rodents will be removed immediately to prevent second hand poisoning to other wildlife. Any and all Corrective Actions having to do with the Rodent Control Program are logged immediately. If rodent activity and or populations are considered low according to the Rodent Index over a consistent time period, the Rodent Control Program is subject to change.
<b>Rodent Trap Indexing Program</b> Hickman's Family Farms has created and designed a Rodent Trap Index Program. Due to the natural landscapes and environment surrounding our facilities, and ranches, it is almost impossible to keep a pest and rodent free environment.		
1-10 = Normal	If counts fall under this category, no actions need to be taken; Hickman's Family Farms follows with normal rodent control program and schedules.	
11-21= Secondary	If counts fall under this category, immediate actions are taken. For example: Technician will do a further investigation, any holes discovered will be plugged, all traps will provide rodent attractants, if this is a high rise Lay House, a rodent control program will be implemented in the manure pit, additional Traps and or bait stations are installed, existing baits will be replaced with single feed baits better known as (quick kill bait). The Technician will then complete additional follow up monitoring with added frequency.	
22 or Higher= Tertiary	If counts fall under this category, an immediate meeting will be scheduled with upper management, all the above actions will be implemented. The Hickman's Family Farms Pest Control Supervisor will inspect interior and exterior of barns to identify the problem. On the interior of the barns additional traps and/or stations will be placed at approximately 15- 20' apart, on the exterior of the barns all Bait Stations will contain quick kill bait. Additional stations will be added and placed approximately 20' apart, if rodent burrows are detected on the exterior of barns additional rock and gravel may be installed.	
0-0 Tolerance= Zero Tolerance	All Egg Processing Facilities and Dry Goods Warehouses are considered for rodent indexing. The interior of our egg	

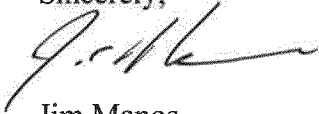


<b>Location</b>	<b>Frequency</b>	<b>Procedure</b>
		processing facilities are inspected and serviced by our Hickman's Pest Control Department technicians on a weekly basis. All exteriors of the Hickman's Family Farms Egg Processing Plants are serviced and inspected by exterminators on a monthly basis.
<b>Insect Control &amp; Preventions</b>		
All technicians applying insecticides have been properly trained in the handling and disposal of these products by Hickman's Pest Control Supervisor.		
<b>Location</b>	<b>Frequency</b>	<b>Procedure</b>
Interior of facilities	Monthly	Monitored to eliminate any insect activity, and prevent multiplication.
Exteriors of buildings	Monthly	Monitored and/or sprayed to keep insect activities to minimum levels, and prevent them from penetrating the building and causing any product damage and/or structural damage.
Multiple flying insect bug zappers are installed systematically throughout the interior of the buildings, covering areas such as main entries, loading docs, cooler doors, break areas, and office spaces.		
Multiple fly bait stations are installed systematically threw out the exterior of building, as a preventive measure to keep flies from penetrating the building and causing any damage to our products. Fly bait stations are installed and monitored by a trained Technician. Fly baits, and locations will be determined and approved by the Hickman's Pest Control Supervisor, to prevent any second hand poisoning.		
<b>Weed Control &amp; Preventions</b>		
All technicians applying herbicides have been properly trained in the handling and disposal of these products by the Hickman's Family Farms Pest Control Supervisor.		
Technician responsible for this particular program decide which method of weed control to use.		
<ol style="list-style-type: none"> <li>1. Mechanical Weed Control</li> <li>2. Biological Weed Control</li> <li>3. Chemical Weed Control</li> </ol>		
All herbicides and mixing ratios are determined and approved by the Hickman's Family Farms Pest Control Supervisor.		
<b>Bird Control &amp; Preventions</b>		
If a bird is discovered or detected inside of any plant or facility it is to be reported immediately to the Hickman's Family Farms Pest Control Supervisor.		
<b>Location</b>	<b>Frequency</b>	<b>Procedure</b>
Outside of the buildings	Bi-Weekly	Inspected for birds' nests. When found they are removed immediately as to prevent accidental intrusion from the birds.

#### **D. Proprietary feed mixtures**

Hickman's Family Farms utilizes specialized feed mixtures throughout the facilities to reduce nitrogen excretion via urine, as well as ammonia emissions from manure. This is accomplished based on specialized feed supplements (including, but not limited to: antibiotics, minerals, vitamins, mold inhibitors, proteins, vegetable oils / additives, animal oils / additives, and soy. Many published studies have shown that application of the ideal protein ratio in the diet is a potential method to further reduce nitrogen emissions. Hickman's Family Farms utilizes a certified animal nutritionist, as well as international corporations specializing in animal nutrition. All feed mixtures as well as the ingredients within them are proprietary in nature and therefore are not publicly available.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Manos", with a stylized flourish at the end.

Jim Manos  
Chief Financial Officer